

Analytical Report for

Earth Data, Inc

Certificate of Analysis No.: 13082215

Project Manager: Andrew Bullen

Project Name : Chester River Hospital Center

Project Location: Chestertown, MD

Project ID : 2781



August 29, 2013

Phase Separation Science, Inc.

6630 Baltimore National Pike

Baltimore, MD 21228

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PHASE SEPARATION SCIENCE, INC.



August 29, 2013

Andrew Bullen
Earth Data, Inc
131 Comet Drive
Centerville, MD 21617

Reference: PSS Work Order(s) No: **13082215**
Project Name: Chester River Hospital Center
Project Location: Chestertown, MD
Project ID.: 2781

Dear Andrew Bullen :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **13082215**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on September 26, 2013. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

A handwritten signature in black ink that reads 'Dan Prucnal'.

Dan Prucnal
Laboratory Manager



Sample Summary
Client Name: Earth Data, Inc
Project Name: Chester River Hospital Center

Work Order Number(s): 13082215

Project ID: 2781

The following samples were received under chain of custody by Phase Separation Science (PSS) on 08/22/2013 at 05:30 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
13082215-001	MW-15	GROUND WATER	08/21/13 11:02
13082215-002	MW-16	GROUND WATER	08/21/13 11:35
13082215-003	MW-17	GROUND WATER	08/21/13 10:50
13082215-004	MW-18	GROUND WATER	08/21/13 09:12
13082215-005	MW-19	GROUND WATER	08/21/13 12:38
13082215-006	MW-20	GROUND WATER	08/21/13 12:48
13082215-007	MW-21	GROUND WATER	08/21/13 10:10
13082215-008	MW-23	GROUND WATER	08/21/13 09:40
13082215-009	MW-24	GROUND WATER	08/21/13 09:54
13082215-010	MW-25	GROUND WATER	08/21/13 09:28
13082215-011	MW-28	GROUND WATER	08/21/13 09:00
13082215-012	MW-29	GROUND WATER	08/21/13 08:44
13082215-013	MW-33	GROUND WATER	08/21/13 12:10
13082215-014	MW-34	GROUND WATER	08/21/13 12:23
13082215-015	MW-35	GROUND WATER	08/21/13 10:30
13082215-016	MW-48	GROUND WATER	08/21/13 07:53
13082215-017	MW-49	GROUND WATER	08/21/13 08:13
13082215-018	MW-50	GROUND WATER	08/21/13 08:24
13082215-019	System Discharge	GROUND WATER	08/21/13 12:55

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.



Sample Summary
Client Name: Earth Data, Inc
Project Name: Chester River Hospital Center

Work Order Number(s): 13082215

Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



Case Narrative Summary

Client Name: Earth Data, Inc

Project Name: Chester River Hospital Center

Work Order Number(s): 13082215

Project ID: 2781

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Sample Receipt:

Two coolers were received at a temperature greater than 6 degrees C, and ice was present. The temperatures observed were 8 degrees C for both coolers. Two small bags of ice were observed on top of containers in each cooler.

Sample Preparation:

Total Petroleum Hydrocarbons - DRO

Preparation Batch: 47193

'Matrix spike/ matrix spike duplicate analyses were not performed due to insufficient sample quantity.'

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13082215
Earth Data, Inc, Centerville, MD
 August 29, 2013

Project Name: Chester River Hospital Center
 Project Location: Chestertown, MD
 Project ID: 2781

Sample ID: System Discharge **Date/Time Sampled: 08/21/2013 12:55** **PSS Sample ID: 13082215-019**
Matrix: GROUND WATER **Date/Time Received: 08/22/2013 17:30**

Total Petroleum Hydrocarbons - DRO Analytical Method: SW-846 8015 C Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	0.20	mg/L	0.10		1	08/27/13	08/27/13 16:05	1040

BTEX MTBE TBA Naphthalene Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
tert-Butyl alcohol	ND	ug/L	20		1	08/27/13	08/27/13 16:09	1014
Methyl-t-butyl ether	ND	ug/L	1.0		1	08/27/13	08/27/13 16:09	1014
Benzene	ND	ug/L	1.0		1	08/27/13	08/27/13 16:09	1014
Toluene	ND	ug/L	1.0		1	08/27/13	08/27/13 16:09	1014
Ethylbenzene	ND	ug/L	1.0		1	08/27/13	08/27/13 16:09	1014
m,p-Xylenes	ND	ug/L	2.0		1	08/27/13	08/27/13 16:09	1014
o-Xylene	ND	ug/L	1.0		1	08/27/13	08/27/13 16:09	1014
Naphthalene	ND	ug/L	1.0		1	08/27/13	08/27/13 16:09	1014



SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

www.phaseonline.com
email: info@phaseonline.com

PHASE SEPARATION SCIENCE, INC.

PSS Work Order #: 13082215 PAGE 1 OF 2

Matrix Codes:
 DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe
 SW=Surface Wtr

Preservatives Used: None
 Analysis Method Required: ③
 * TPH-DRO

Matrix Codes:
 C = CONTAINERS
 COMP = COMPOUNDS
 GRAB = GRAB

① *CLIENT: Earth Data Inc *OFFICE LOC: Centreville, MD
 *PROJECT MGR: A. Bullen *PHONE NO.: (410) 758-8160
 EMAIL: (410) 758-8168
 *PROJECT NAME: Chesler River Hospital Center PROJECT NO.: 2781
 SITE LOCATION: Chestertown, MD P.O. NO.:
 SAMPLER(S): DW CERT NO.:

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	SAMPLE TYPE	REMARKS
1	MW-15	8-21-13	1102	GW	G	
2	MW-16	8-21-13	1135	GW	G	
3	MW-17	8-21-13	1050	GW	G	
4	MW-18	8-21-13	0912	GW	G	
5	MW-19	8-21-13	1238	GW	G	
6	MW-20	8-21-13	1248	GW	G	
7	MW-21	8-21-13	1010	GW	G	
8	MW-23	8-21-13	0940	GW	G	
9	MW-24	8-21-13	0954	GW	G	
5	MW-25	8-21-13	0928	GW	G	

④ *Requested TAT (One TAT per COC)
 5-Day 3-Day 2-Day Other
 Next Day Emergency

Data Deliverables Required:
 COA QC SUMM CLP LIKE OTHER

Ice Present: Yes Temp: 8°C
 Shipping Carrier: TTE

of Coolers: 2
 Custody Seal: ABS

Special Instructions:
 DW COMPLIANCE? YES NO
 EDD FORMAT TYPE: _____
 STATE RESULTS REPORTED TO:
 MD DE PA VA WV OTHER

Relinquished By: (1) T. Lee Date: 8-22-13 Time: 1555 Received By: D. Brown
 Relinquished By: (2) D. Become Date: 8-22-13 Time: 1830 Received By: S.W.
 Relinquished By: (3) _____ Date: _____ Time: _____ Received By: _____
 Relinquished By: (4) _____ Date: _____ Time: _____ Received By: _____

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723
 The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

www.phaseonline.com
email: info@phaseonline.com

PHASE SEPARATION SCIENCE, INC.

1 *CLIENT: Earth Data Inc *OFFICE LOC. Centerville, MD
 *PROJECT MGR: A. Bullen *PHONE NO.: 410 758-8160
 EMAIL: FAX NO.: (410) 758-8168
 *PROJECT NAME: Chesler Bvrs. Hospital Center PROJECT NO.: 2781
 SITE LOCATION: Chesler town, MD P.O. NO.:
 SAMPLER(S): DW CERT NO.:

PSS Work Order #: 13082205 PAGE 2 OF 2

Matrix Codes:
 SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air W=Wipe
 No. CONTAINERS

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No.	SAMPLE TYPE	C = C COMP = COMP G = GRAB	PRESERVATIVES USED	ANALYSIS METHOD REQUIRED	REMARKS
1	MW-28	8-21-13	0900	GW	1	G				
2	MW-29	8-21-13	0844	GW	1	G				
3	MW-33	8-21-13	1210	GW	1	G				
4	MW-34	8-21-13	1223	GW	1	G				
5	MW-35	8-21-13	1030	GW	1	G				
6	MW-48	8-21-13	0753	GW	1	G				
7	MW-49	8-21-13	0813	GW	1	G				
8	MW-50	8-21-13	0824	GW	1	G				
9	System Discharge	8-21-13	1255	GW	4	G				

4 *Requested TAT (One TAT per COC)
 5-Day 3-Day 2-Day
 Next Day Emergency Other
 Data Deliverables Required:
 COA GC SUMM CLP LIKE OTHER
 Special Instructions:
 # of Coolers: 2
 Custody Seal: ABS
 Ice Present: Yes Temp: 80/80/80
 Shipping Carrier: TTE

5 Relinquished By: (1) T. Lee Date: 8-22-13 Time: 1555 Received By: D. Doome
 Relinquished By: (2) A. Doome Date: 8-22-13 Time: 1730 Received By: SW
 Relinquished By: (3)
 Relinquished By: (4)

STATE RESULTS REPORTED TO:
 MD DE PA VA WV OTHER
 DW COMPLIANCE? YES NO EDD FORMAT TYPE _____
 6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723
 The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	13082215	Received By	Simon Crisp
Client Name	Earth Data, Inc	Date Received	08/22/2013 05:30:00 PM
Project Name	Chester River Hospital Center	Delivered By	Trans Time Express
Project Number	2781	Tracking No	Not Applicable
Disposal Date	09/26/2013	Logged In By	Robyn Rhudy

Shipping Container(s)

No. of Coolers	2	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	8
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Not Provided</u>
	<u>N/A</u>

Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 19

Total No. of Containers Received 22

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Two coolers were received at a temperature greater than 6 degrees C, and ice was present. The temperatures observed were 8 degrees C for both coolers. Two small bags of ice were observed on top of containers in each cooler.

Samples Inspected/Checklist Completed By:

Robyn Rhudy

Date: 08/23/2013

PM Review and Approval:

Lynn Moran

Date: 08/23/2013